Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

VOL. I. NOVEMBER, 1900. NO. 3.

THE COURSE OF STUDY

A PUBLICATION FOR TEACHERS AND PARENTS

ISSUED MONTHLY—TEN NUMBERS A YEAR.

Geography

Zonia Baber Wallace W. Atwood

Since steamboats, railroads, cables, and telegraphs have almost eliminated distance, man is brought into daily contact with evidences of the different peoples and products of the various parts of the globe. The entire world has become the environment of civilized man. His ability to rightly appreciate, enjoy, and adapt himself to his environment depends upon his knowledge of humanity and of natural law. And it is only by immediate intellectual contact with humanity and the forms and forces of nature that the appreciation of each in its true relation is obtained.

The ability to interpret the meaning of the surrounding landscape and of the world's landscapes makes travel and study a delight; and it is through the sympathetic study of one's own and of foreign peoples that the kinship of mankind is established.

There can be little appreciation of historical events without a knowledge of the geographical stage on which they were enacted. Not only the industries and habits but the condition and appearance of the present peoples of the world are largely due to their geographical environment. The study of geography, then, broadens man's horizon from his immediate neighborhood until it encompasses the entire earth; while geology discloses former geographies, one landscape passing, as in dissolving views, into another. The knowledge of mineralogy, paleontology, meteorology and botany gives detail and definition to the changing scenes.

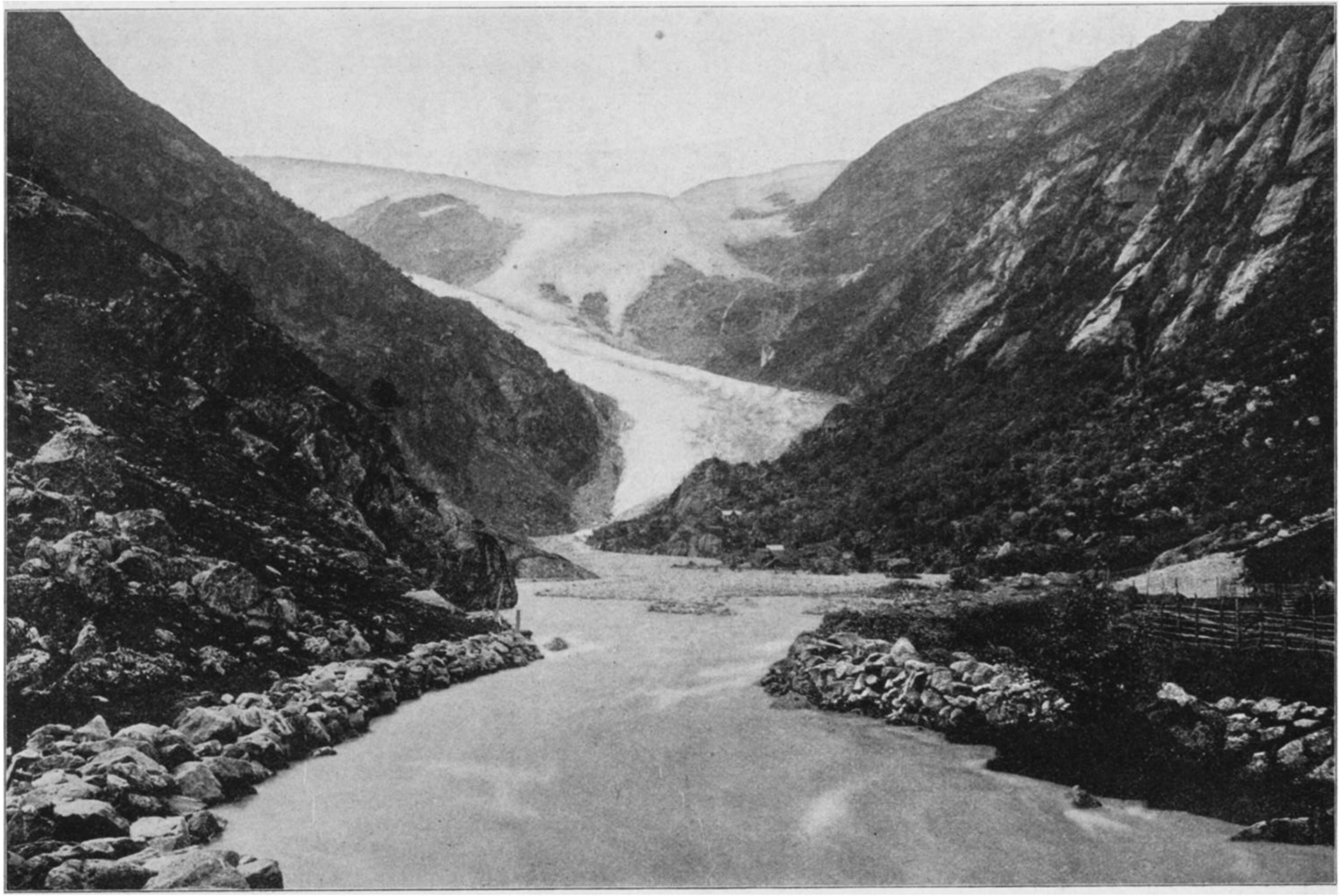
In the Chicago Institute, throughout all the work, from the lowest grade through the pedagogical school, opportunity will be given, so far as is possible, to witness the processes of landscape-making, — as the action of rivers, wind, frost, rain, waves, currents, vegetation, animals, man, etc., on the earth, as well as the results of the previous work of earth-shaping forces.

Excursions for the purpose of observing man in his struggle to adapt natural forces and objects to his needs, in the cultivation of the soil, the raising of cattle, the felling of forests, quarrying, mining, building of roads, bridges, houses, transportation of commodities, etc., will be made.

The out-of-door and indoor laboratories will be used in the illumination and solution of problems which the field trips and other work suggest.

The following is a general outline for the year's work in the elementary and secondary schools.

FIRST GRADE: In the First Grade during the year field trips to the lake shore, sand dunes, swamp, river, woods, farm, park, zoölogical garden, conservatories, large fruit and vegetable stores and museums, will give an opportunity for a variety of geographical impressions.



BUARBRAEN GLACIER

SEE GEOGRAPHY FOR PEDAGOGIC SCHOOL, PAGE 188

SECOND GRADE: The First Grade work will be continued during the second year, and where field trips are impossible, the children will be introduced to other forms of land and water, as mountains, islands and seas, through stories, pictures and models.

THIRD GRADE: Advantage will be taken of the child's interest in steamboats and railroad trains, in the study of the commerce of this city. His desire to reproduce will find satisfaction in building a miniature city. The making of the streets, kinds of pavements, building of houses, street railways, manner of supplying the city with water, light, and heat, the problems of transportation, and the distribution of food and clothing will be treated so far as the subject appeals to the children. The source of much of the food will be found on the farm, where certain phases of its manner of production will be observed.

FOURTH GRADE: The Fourth Grade pupils will continue the work of the Third in tracing to their original homes certain peoples who compose this city, as the Chinese, Italians, and Norwegians. In the consideration of peoples, the young children are interested in the life of other little children, not in the doings, social and political, of grown people. They care to know of the home life, the food, clothing, games, and the school life of the foreign children of their own age; while the higher grades will respond to certain phases of the actions of mature men and women.

They will study the regions which have supplied this city with its building material, food, and clothing, studying the seas and lakes as highways and sources of food supply; considering islands as valuable reliefs in the sea, and giving the simple story of their formation; studying Hawaii as a type of volcanic formation; Bermuda as a coral island; and Cuba as a continental island. The study of coal and of the common metals—iron, gold, silver, copper, tin, and lead—will lead them to the subject of mining.

In the study of the forests of the cold, temperate, and tropical climates they will find the source of the useful woods, foods, and other products in daily use. The domestic animals and the wild animals seen in the zoölogical garden will be traced to their normal habitats.

The pupils will get acquainted with the common building-stones and examine accessible quarries.

FIFTH GRADE: The cause of the general topographical appearance of the landscapes in this region will be found in the study of glaciers. In studying the continent of North America, the ideas of typical geographic areas considered in the previous grades will be correlated, so as to give a picture of the continent as a whole.

SIXTH GRADE: In the Sixth Grade the horizon of interest will be broadened by a study of Eurasia and South America, illuminating the changing landscapes in those countries by the results of a closer examination of the human and physiographic conditions in this locality. Special intensive study will be made of regions which have produced great historic peoples, as China, India, Persia, Palestine, and Europe.

SEVENTH GRADE: A study of Africa, Australia, the islands of the world, and the oceans, will bring the general impressions of the entire earth within the horizon of experience.

EIGHTH GRADE: As the pupils develop in power, a closer study will be made of the subjects under consideration. The accessible regions which have been receiving attention in all the lower grades will present to the Eighth Grade new phases of physiography, geology, mineralogy, meteorology, and political and social conditions.

Basing their work upon the study of streams in this region, they will classify the important rivers of the world as to their influence as land-changing agencies and their influence upon civilization.

The distribution of the world's great mountain systems, its deserts, prairies, and forests, and their effects upon human progress, together with the distribution of the great nations of the earth, with their elastic boundary lines, will receive special attention.

NINTH GRADE: The work of the Eighth Grade will be continued in the ninth year, with a special study of all the physiographic processes and results in this and other parts of the world.

TENTH GRADE: In the closer study of meteorology, the observation and study of the weather conditions in this locality and of the world will be organized; while paleontology will broaden the knowledge of the present life.

ELEVENTH GRADE: In the eleventh year the broad questions of the formation of the world and the changes which have occurred will be considered in the study of general geology.

TWELFTH GRADE: The influence of geography, geology, and meteorology upon the present inhabitants of the earth will be considered in the twelfth year, with a special study of peoples of primitive civilization who now inhabit the earth.

Throughout all the grades simple geological problems, germane to the subject of study, will be considered.

Physiography of the Land

TENTH GRADE: Field trips will be taken each week, as long as the weather permits, and the indoor work will be developed from the field observations. Lantern slides, pictures, maps, and models may also be used.

III. Land forms resulting from stream work.

1. Valleys: (*a*) In youth, (*b*) in maturity, (*c*) in old age.
2. Alluvial cones and fans. Develop story of waste-filled basins of the world.
3. Flood plains. When does development begin? Study of Louisiana region. Settlement and occupation of flood plains.
4. Terraces. Why and when developed?
5. Bars and islands.
6. Deltas. Work out detailed structure in laboratory.

IV. Effect of unequal hardness of material upon valley development.

1. On shapes of valleys.
2. On development of rapids.
3. On development of falls.

V. Accidents to streams.

1. Through piracy. Causes for and examples of.
2. From rising of the land. Develop this from the story of the coastal plain of the United States.
3. From sinking of the land. Develop this from the story of the coastal plain of the United States.
4. From volcanic activities.
5. From glaciation. Find examples as near home as possible.

VI. Erosion history of a region read from its topography.

1. The signs of youth. Study shapes of valleys and of inter-stream areas.
2. The signs of maturity. Study shapes of valleys and of inter-stream areas.
3. The signs of old age. Study shapes of valleys and of inter-stream areas.
4. Rejuvenation. (*a*) causes, (*b*) changes in valleys resulting from rejuvenation.
5. Peneplains.
6. Cycles of erosion.

VII. The influence of the topography during the different stages of an erosion cycle upon the settlement and development of a region. This work will be based upon the study of certain areas, chiefly in the United States, where the relationship of man to his geographic environment is clearly shown.

VIII. Underground water.

Field trip: Examine construction of well, sewer, or basement.

1. Source of underground water.
2. Condition in which it exists.
3. Depth at which it is found.
4. Movement of underground water as shown in springs, streams, and vegetation.

Laboratory experiments showing the amount of water exhaled from certain leaf areas.

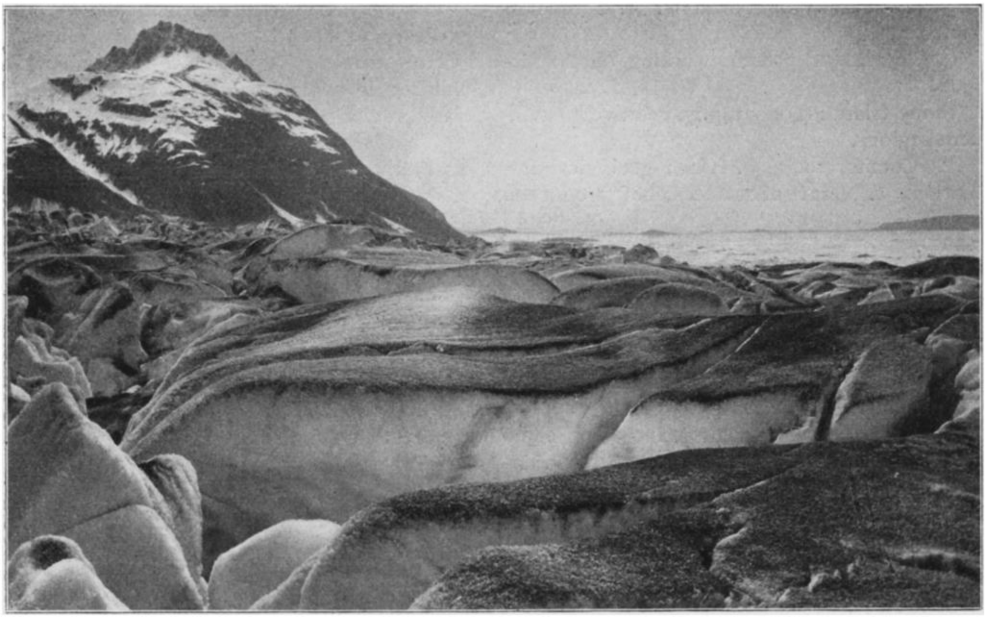
5. Effect of underground water on the structure of rocks.
6. Account for the differences in hot and cold springs? mineral and ordinary springs?
7. Formation of common wells; artesian wells.
8. Effect of underground water on topography. In what kind of country rock do sink holes occur?
9. Use of underground water to vegetation, animals, and man. Relation to permanent streams.
10. Relation of caves to underground water.
11. Location of the noted cave regions of the world. Account for their presence.
12. Use of caves to animals; to man.
13. Relation of caves to architectural development.

IX. Study of shore lines.

1. The work of waves.
    (*a*) erosion.
        (1) cliffs.
        (2) cut terraces.
        (3) caves.
    (*b*) transportation.
        (1) by waves.
        (2) by undertow.
        (3) by shore currents.
    (*c*) deposition.
        (1) built terraces.
        (2) brack ridges.
        (3) barriers.
        (4.) spits.
        (5.) bars.
        (6.) hooks.
        (7.) loops.
2. Recognition of ancient shore lines.

References: Davis, *Physical Geography;* Mill, *Realm of Nature;* Geikie, *Elementary Lessons in Physical Geography;* Salisbury, *Physical Geography of New Jersey;* Salisbury and Atwood, *Physical Geography of the Devil's Lake Region;* Russell, *Rivers of North America.*

MUIR GLACIER



CREVASSE, MUIR GLACIER

Third Year, High School

General Geology for November.

The October work in this course covered what is generally known as *dynamic geology*, including the study of those agents which have always been at work bringing about geologic changes and which may now be studied in the field. This month the general subject will be *structural geology*, and with the work will be associated the study of regions where the different geological structures exist.

V. The rocks of the earth's crust.

1. Igneous rocks.
2. Sedimentaty rocks.
3. Metamorphic rocks.
   Familiarity with the common rocks of the region should be secured in the field and laboratory.

VI. Igneous rocks.

1. Original positions.
2. Present positions.
3. Structures common to igneous rocks.
4. Metamorphism of igneous rocks.

VII. Sedimentary rocks.

1. Original positions. Where are there any being formed to-day?
2. Conditions for the building of
   (*a*) sandstones, (*b*) limestones, (*c*) conglomerates, (*d*) shales, (*e*) coal.
   How can we account for a series of the above formations, each one lying conformably on the one beneath?
3. Present positions of sedimentary formations.
4. Folding, faulting, and fracturing.
5. Cleavage, joints, and mineral veins.
6. Metamorphism of sedimentary rocks.

VIII. Unconformity.

References: Scott, *Introductions to Geology;* Geikie, *Text-Book on Geology.*

Pedagogical School

I. Glaciers.

Field trips to Stony Island and Glencoe. At Glencoe note:

1. Topography of the regions visited and of adjacent regions.

a. Materials that compose the landscape; 1. Clay, sand, gravel; bowlders; shape, condition and variety of bowlders. 2. Source of material.

b. Agents at present working on this region.

Stony Island: Topography, relative to adjacent regions.

1. Country rock: *a*. Kind; geological formation. *b*. Nature of surfaces; how produced?

II. Location of existing glaciers.

1. In mountains: Alps, Himalayas; Rockies, Andes, Caucasus, Scandinavia, New Zealand. Cause?

2. Polar regions. Cause?

3. Meteorological conditions favorable to the production of glaciers.

4. Appearance of glaciers, including snow fields: *a*. materials; *b*. crevasses—cause; *c*. detritus: 1. source; 2. transportation.

5. Movement of glaciers: *a*. evidence of; *b*. effect upon ice; upon surface passed over.

6. Moraine: *a*. Location in relation to glacier; *b*. material; *c*. topography of drift.

7. Fluvial association: *a*. Surface streams; *b*. basal streams; *c*. effect on associated detritus.

III. Location of extinct continental glaciers.

1. Topography of glaciated region where drift is present? where absent?

2. Relation of lakes of North America and Europe to glacial history.

3. Movement of glaciers. Relation to preglacial valleys.

4. Proofs of different glacial epochs?

5. Effect of continental glaciation on the present industrial condition of affected areas.

Was the glacial epoch beneficial or detrimental to the portion of the United States so affected? What would have been the result had the glacier reached to the Gulf of Mexico? What would be the condition here had the glacier period not occurred?

IV. In what grade would you introduce the study of glaciers if you lived in a glacial region? In a non-glacial region? Why?

What aspect would appeal to the different grades? What should be ignored? Why?

How would you introduce the subject to children in a glaciated region? In a nonglaciated region?

What laboratory experiments, pictures, models, literature would aid the pupil in the study of this subject?

Give plan for teaching the subject to the grade you would like to teach.

References

Russell, *Glaciers of North America;* Geikie, *Ice Age*, Text-Book on Geology; Davis, *Physical Geography; Journal of Geology*, Vol. I-IV; Salisbury, *Physical Geography of New Jersey;* Scott, *Introduction to Geology;* Davis and Shaler, *Glaciers*.

V. Underground water.

For detailed outline, see outline for first year high school.

In what grades should this subject be introduced? Why?

What would be the motive for teaching underground water?

What experiments in chemistry and physics would the teaching necessitate?

What expression on the part of the pupil in drawing, painting, modeling, and making would the teaching necessitate?

Give brief plan for teaching the subject to some grade.

References

Shaler, *Aspects of the Earth;* Shaler, *Brief History of the Earth;* Indiana Geological Reports; Scott, *Introduction to Geology;* Geikie, *Text-Book in Geology;* Dana, *Text-Book of Geology;* Geikie, *Elementary Lessons in Physiology;* Tarr, *First Book in Physical Geography.*

NOTE.—Owing to readjustment of the school program, the courses in meteorology and anthropogeography have been discontinued. If readers desirous of following these courses will address the COURSE OF STUDY, their relationship with the Institute instructors may be continued through correspondence.